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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,160	04/25/2000	Fumio Ishizu	0057-2634-2	9285

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ALEXANDRIA, VA 22314

EXAMINER

HARPER, KEVIN C

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 08/24/2003

#17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/557,160

Applicant(s)

ISHIZU, FUMIO

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 5 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/25/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 4, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

1. The drawings are objected to because in Figures 3 and 4, the leftmost "C12/C22" should be -C13/C23--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-11 are objected to because in claims 1-4, 6-9 and 11, "with a regularity" should be --in a regular pattern-- and "not with a regularity, but at randomly" should be --in a random pattern--. Appropriate correction is required.
3. Claims 1-5 are objected to because in claim 1, "demodulating a received signals" should be --demodulating the received signals--
4. Claim 10 is objected to because "ration" in line 3 should be --ratio--.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent

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by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 6 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaiser et al. (US 6,188,717).

5. Regarding claim 1-4, 6-9 and 11, Kaiser discloses a multicarrier transfer system based on OFDM/CDMA (abstract, lines 1-3). The system comprises a spread signal rearrangement unit (Figure 2, items 4-5; col. 5, lines 28-65; Figure 6) for first arranging the spread signals in arrays (blocks) on a frequency axis and time axis first and then two-dimensionally re-arranging spread signals (Figure 4; col. 5, lines 58-61; note: the interleaver scrambles data two-dimensionally which would otherwise be unscrambled two-dimensionally -- col. 5, line 66 through col. 6, line 10). The rearrangement is either predetermined or random (col. 5, line 60). The system also includes a receiver (Figure 3).

Allowable Subject Matter

6. Claims 5 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten to overcome any applicable claim objections.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baggen (US 5,799,033) discloses a random frequency rearrangement for an OFDM frequency interleaver (Figure 1; col. 4, lines 9-12 and 20-28) to achieve frequency diversity against periodic frequency fading (abstract, lines 1-7).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139. The examiner can normally be reached weekdays, except Wednesday, from 9:30 AM to 8:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 703-308-5463. The fax number for Technology Center (TC) 2600 is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office for TC 2600 at 703-306-0377.

Kevin C. Harper

A handwritten signature in black ink, appearing to read 'Kevin C. Harper', written over a horizontal line.

August 25, 2003